Candidate supervisor's information summary form

dr hab. Marcin A. Kurek	
Discipline / disciplines of science	Food technology and nutrition
Professional development (degrees and titles) in chronological order	Habilitation Food technology and nutrition – 12/2018 Ph.D. Food technology and nutrition – 12/2015 MSc. Eng. Food technology and nutrition – 07/2013
Most important publications / patens over the last 3 years (maximum 10)	1. Kurek, M. A., & Pratap-Singh, A. (2020). Plant-based (hemp, pea and rice) protein–maltodextrin combinations as wall material for spray-drying microencapsulation of hempseed (*Cannabis sativa*) oil. Foods, 9(11), 1707. 2. Kanclerz, A., Drozińska, E., & Kurek, M. A. (2019). Microencapsulation of *Camelina sativa* oil using selected soluble fractions of dietary fiber as the wall material. *Foods*, *8*(12), 681. 3. Pieczykolan, E., & Kurek, M. A. (2019). Use of guar gum, gum arabic, pectin, beta-glucan and inulin for microencapsulation of anthocyanins from chokeberry. International Journal of Biological Macromolecules, 129, 665-671. 4. Moczkowska, M., Karp, S., Niu, Y., & Kurek, M. A. (2019). Enzymatic, enzymatic-ultrasonic and alkaline extraction of soluble dietary fibre from flaxseed–A physicochemical approach. Food Hydrocolloids, 90, 105-112. 5. Kurek, M. A., Moczkowska, M., Pieczykolan, E., & Sobieralska, M. (2018). Barley β-d-glucan–modified starch complex as potential encapsulation agent for fish oil. International Journal of Biological Macromolecules, 120, 596-602. 6. Kurek, M. A., Karp, S., Wyrwisz, J., & Niu, Y. (2018). Physicochemical properties of dietary fibers extracted from gluten-free sources: quinoa (*Chenopodium quinoa*), amaranth (*Amaranthus caudatus*) and millet (*Panicum miliaceum*). Food Hydrocolloids, 85, 321-330. 7. Kurek, M. A., Karp, S., Stelmasiak, A., Pieczykolan, E., Juszczyk, K., & Rieder, A. (2018). Effect of natural flocculants on purity and properties of β-glucan extracted from barley and oat. Carbohydrate Polymers, 188, 60-67. 8. Kurek, M. A., Wyrwisz, J., Karp, S., & Wierzbicka, A. (2017). Particle size of dietary fiber preparation affects the

	bioaccessibility of selected vitamin B in fortified wheat bread. Journal of Cereal Science, 77, 166-171.
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	Defended doctoral theses: 07/2020 - Sabina Karp, The use of β-glucan in the production of a gluten-free product made of yeast dough Open doctoral theses: 10/2020 - Samira Mohammadalinejhad, Design of intelligent and active packaging system for simultaneous monitoring freshness and extending the shelf life of muscle foods, cosupervisor, main institution NTNU in Trondheim
Project/grants achievements (from the last 10 years)	Project Manager: The National Centre for Research and Development project “Microencapsulation as the technique for increasing the application of beta-glucan in the food industry (LIDER/25/0022/L7/15/NCBR/2016). Research Task Manager: Development of the technology and composition of a ready-made bread mix which is a source of fiber with beta-glucan fraction, Grant to maintain the research potential and young scientists and participants of doctoral studies (2014-2015) PhD student as part of the Project: Project "BIOPRODUCTS, innovative technologies for the production of healthy bakery products and pasta with reduced energy value". UDA-POIG.01.03.01-14-041 / 12. Operational Program Innovative Economy (2013-2015)
Topic – research problem – for which the candidate supervisor seeks a doctoral student	The research problem for which the PhD student is sought is in using the microencapsulation of substances of plant origin. The stages will be based on the selection of the source of bioactive substances, the optimization of the extraction processes and the development of a microencapsulation method by means of spray drying or freeze drying. It is possible to implement the research problem by 2 PhD students.
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